TIMKEN

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Timken Part Number LM603049 - LM603011, Tapered Roller Bearings - TS (Tapered Single) Imperial

This is the most basic and most widely used type of tapered roller bearing. It consists of two main separable parts: the cone (inner ring) assembly and the cup (outer ring). It is typically mounted in opposing pairs on a shaft.
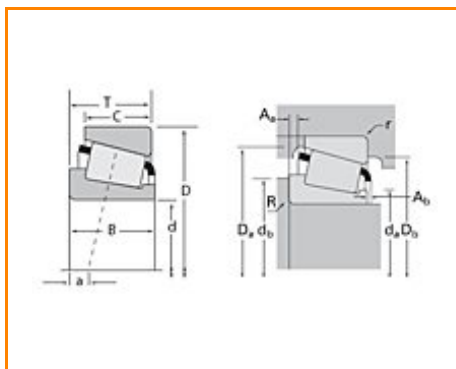
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Specifications   −

Series	LM603000
Cone Part Number	LM603049
Cup Part Number	LM603011
Design Units	Imperial
Bearing Weight	0.400 Kg 0.80 lb
Cage Type	Stamped Steel

Dimensions   −

d - Bore	45.242 mm 1.7812 in
D - Cup Outer Diameter	77.788 mm 3.0625 in
B - Cone Width	19.842 mm 0.7812 in
C - Cup Width	15.080 mm 0.5937 in
T - Bearing Width	19.842 mm 0.7812 in

Abutment and Fillet Dimensions　　　　　　　　　　　　　　　　　　　　　　　−

R - Cone Backface "To Clear" Radius[1]	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius[2]	0.76 mm 0.030 in
da - Cone Frontface Backing Diameter	52.07 mm 2.05 in
db - Cone Backface Backing Diameter	57.91 mm 2.28 in
Da - Cup Frontface Backing Diameter	74.68 mm 2.94 in
Db - Cup Backface Backing Diameter	71.12 mm 2.8 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	0.8 mm 0.03 in
a - Effective Center Location[3]	-2.30 mm -0.09 in

Basic Load Ratings ‒

C90 - Dynamic Radial Rating (90 million revolutions)[4]	19800 N 4450 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	76300 N 17200 lbf
C0 - Static Radial Rating	77900 N 17500 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	14500 N 3250 lbf

Factors ‒

K - Factor[7]	1.37
e - ISO Factor[8]	0.43
Y - ISO Factor[9]	1.41
G1 - Heat Generation Factor (Roller-Raceway)	26.4
G2 - Heat Generation Factor (Rib-Roller End)	14.4
Cg - Geometry Factor	0.0785

[1] These maximum fillet radii will be cleared by the bearing corners.

[2] These maximum fillet radii will be cleared by the bearing corners.

[3] Negative value indicates effective center inside cone backface.

[4] Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

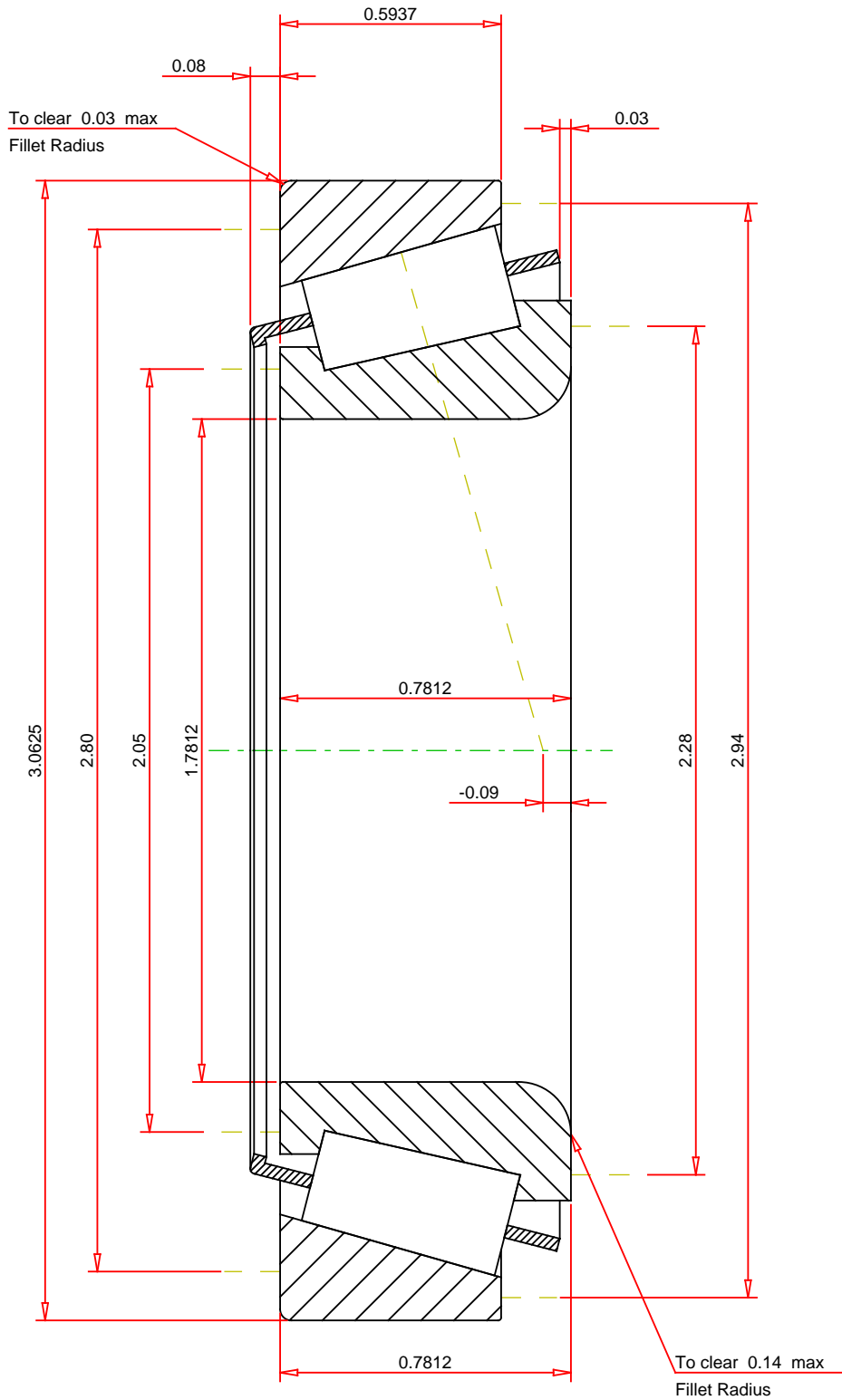[5] Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

[6] Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[8] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction

on use.

[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

0.5937

0.08

To clear 0.03 max
Fillet Radius

0.03

3.0625

2.80

2.05

1.7812

0.7812

-0.09

2.28

2.94

0.7812

To clear 0.14 max
Fillet Radius

IMPERIAL UNITS

ISO Factor - e	0.43
ISO Factor - Y	1.41
Bearing Weight	0.8 lb
Number of Rollers Per Row	20
Effective Center Location	-0.09 inch

TIMKEN ®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM603049 - LM603011
TS BEARING ASSEMBLY

K Factor	1.37	
Dynamic Radial Rating - C90	19800	lbf
Dynamic Thrust Rating - Ca90	14500	lbf
Static Radial Rating - C0	77900	lbf
Dynamic Radial Rating - C1	76300	lbf

Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

FOR DISCUSSION ONLY